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## Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the

application:

## Listing of Claims

1.      (Currently Amended)  A method of estimating a maintenance date for a tool based upon a
parameter of the tool, comprising:

obtaining a difference between a detected value of the parameter and a maintenance value
of the parameter;

determining whether the difference is less than or equal to a predefined value;

performing a maintenance procedure if the difference is less than or equal to the
predefined value; and

estimating a maintenance date according to the difference and a variation value if the
difference is greater than the predefined value, the variation value representing a change in the
parameter per time unit and the maintenance date being stored to a maintenance schedule.

2.      (Currently Amended)  The method of claim 1, wherein the maintenance date is estimated
by adding (a) a current date to (b) the difference divided by the variety value; and
~~the maintenance date is stored to a maintenance schedule.~~

3.      (Original)  The method of claim 1, wherein the variation value is determined by a
statistical method.

4.      (Original)  The method of claim 1, wherein the variation value is calculated from stored
data.

5.    (Original)  The method of claim 4, wherein the variation value is calculated from data corresponding to detected values of the parameter which were obtained from the tool over a period of time prior to the estimating of a maintenance date.

6.    (Original)  The method of claim 5, wherein the obtaining, the determining and the performing are performed automatically.

7.    (Original)  The method of claim 5, wherein the period of time is a plurality of days.

8.    (Original)  The method of claim 4, wherein the variation value is calculated from data obtained in previous maintenance date estimates.

9.    (Original)  The method of claim 1, wherein the variation value is calculated from data corresponding to detected values of the parameter which were obtained from the tool over a period of time.

10.    (Original)  The method of claim 1, wherein the variation value is calculated from data immediately inputted by a user.

11.    (Original)  The method of claim 1, wherein the variation value is calculated from stored data and data immediately inputted by a user.

12.    (Currently Amended)  A method for estimating a maintenance date for a tool, comprising:

obtaining a plurality of differences between a plurality of detected values of a plurality of parameters of the tool and a plurality of maintenance values of the parameters;

determining whether each difference is less than or equal to a corresponding predefined value for each parameter;

performing a maintenance procedure if a predetermined number of the differences are less than or equal to their corresponding predefined values; and

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estimating a maintenance date according to the differences and a plurality of variation values for each parameter if the predetermined number of the differences are not less than or equal to their corresponding predefined values;

wherein each variation value represents a change in a corresponding one of the parameters per time unit for the tool; and

wherein the maintenance date is stored to a maintenance schedule.

13.    (Original)  The method of claim 12, wherein the predetermined number is equal to one; ~~and the maintenance date is stored to a maintenance schedule~~.

14.    (Original)  The method of claim 12, wherein each variation value is calculated from data corresponding to detected values of the corresponding parameters which were obtained from the tool over a period of time prior to the estimating of a maintenance date.

15.    (Original)  The method of claim 14, wherein the variation values are calculated from stored data.

16.    (Original)  The method of claim 14, wherein the period of time is a plurality of days.

17.    (Original)  The method of claim 12, wherein the variation values are calculated from data immediately inputted by users.

18.    (Original)  The method of claim 12, wherein the variation values are determined by a statistical method.

19.    (Original)  The method of claim 12, wherein each of the variation values represents a change of the corresponding parameter per time unit.

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20.    (Currently Amended)   An apparatus for estimating a maintenance date for a tool, comprising:

a database comprising a variation value that represents a change of a parameter of the tool per time unit; and

a controller operatively connected to the database and configured to estimate ~~the~~ a maintenance date for the tool according to a variation value and a difference between a detected value of the parameter and a maintenance value of the parameter, the maintenance date being stored to a maintenance schedule;

wherein the controller is configured to provide a recommendation that a maintenance procedure be performed on the tool when the difference is less than or equal to a predefined value.

21.    (Original)  The apparatus of claim 20, wherein the apparatus further comprises a connection unit, which is connected between the tool and the apparatus and which is configured to obtain the detected value of the parameter from the tool.

22.    (Original)  The apparatus of claim 21, wherein the apparatus further comprises a fab information master – equipment information master unit connected to the controller to store the maintenance date to the maintenance schedule.

23.    (Original)  The apparatus of claim 20, wherein the controller is configured to estimate the maintenance date for the tool according to a plurality of variation values and a plurality of differences between a plurality of maintenance values of the parameters and a plurality of detected values of the parameters.